**School of Computing**

**Year 4 Project Proposal Form**

**SECTION A**

Project Title: Carzone deal predictor application

Student Name David O’Regan

ID Number 10331017 Stream: CA4

Staff Member Consulted (must be same person as in section B)

Darragh O’Brien

Project Description - Please see section D

**SECTION B** (to be completed by supervisor)

I approve this project and agree to act as supervisor for the above student(s)

Staff Name \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Staff Signature \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Date \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

**SECTION C (t**o be completed by Year 4 project coordinator)

Date Received\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_

Project Ref. No. \_\_\_\_\_\_\_\_\_\_\_\_\_

Verified Supervisor Signature YES NO

School Review Panel Approved YES NO

Please return form to the CA400 Project Coordinator.

**SECTION D**

Project Description:

This project will be broken into three major parts to achieve the project goal.

Project Goal: Be able to “predict” a good deal for major car brands on car zone.ie. Example - If the projected price for a BMW M3, 2006 with leather seats is 4500 Euro and one appears for 4000, the application will flag this car as a possibly good deal worth investigation.

Part 1: Web scraper

Using python(scrappy), the website carzone.ie will be scraped, harvesting the data to be used i.e. car makes, price, NCT, rims, seats, milage etc

Part 2: Data storage and Machine learning(Prediction)

The data will be stored in a webserver either in CSV form or Xml tables to be used. Then using some form of machine learning(Liner regression, neural network etc) we will predict the “projected price” for models of cars and subsequently “spot” deals that fall below projections.

Part 3: Showing data

The data will be displayed on an Android application for Android devices.

Achievements:

When the project is finished and fully functional the user base will be people who want to buy a second hand car without needing much knowledge about cars in general. It will reduce workload attached to finding a worthwhile buy for users and possibly car zone itself. I will approach car zone when I have finished the project as a possible application for them.

Justification:

The project has possibilities for both individual users and large business looking to reduce workload associated with finding a good deal when buying a second hand car model. I know from past experience, you can spend up to 3-4 weeks searching through the market to pinpoint a good deal.

Programming Languages:

Python

Java

XML

CSS

HTML

Machine learning

Programming tools:

Scrapy

XMLPaths

webserver

Python complier

Java complier

Machine learning

Learning challenges:

Learn how to scrape data from a website(nicely)

Learn to store data in webserver

Learn to manipulate data with Machine Learning

Learn to develop front end application

Learn to publish data from webserver to front end application.

Learn Machine learning.

Hardware/Software platform:

Android application

Desktop application

Special requirements(HW/SW):

Listed above